

1 **WHAT IS CLAIMED IS:**

2 1. A method for fabricating reflective type reflector plates of a reflective
3 liquid crystal display includes the deposition of a protection layer over a glass
4 substrate after thin film transistors are built on top of the glass substrate to shield
5 off reflection from an exposure stage, so as to enable even distribution of light
6 over the surface of the protection layer and shortening of the light exposure time.

7 2. The method as claimed in claim 1, wherein the fabricating process at
8 least includes the steps of:

9 forming transparent electrodes over the glass substrate after thin film
10 transistors are built on top of the glass substrate;
11 depositing a protection layer over the transparent electrodes;
12 patterning the transparent electrodes and the protection layer through the
13 steps:
14 spin coating of a photo-resist layer over the protection layer using
15 polymer resin material;
16 removing the resin material over non-pattern areas by exposure and
17 developing with a solution; and
18 depositing a reflective metal film.

19 3. The method as claimed in claim 1, wherein the fabricating process also
20 applies to a semi-transmissive type reflector plate, including deposition of
21 transparent electrodes, deposition of protection layer, patterning of the
22 transparent electrodes and the protection layer, spin coating of photo-resist layer,
23 exposure and developing, and depositing of reflective metal film, and, in addition,
24 an etching back process is used to remove the metal deposits over non-pattern

1 areas on the protection layer to form a light-transmitting region on the reflective
2 surface.

3 4. A method for fabricating reflective type reflector plates of a reflective
4 liquid crystal display includes the processes to be performed over the glass
5 substrate to form thin film transistors, transparent electrodes and undulating resin
6 outgrowth, wherein the pixel region has a protection layer in between the
7 transparent electrodes and the undulating resin outgrowth.

8 5. The method as claimed in claim 4, wherein the glass substrate has a
9 light-transmitting region in between the protection layer and the undulating resin
10 outgrowth.

11 6. A method for fabricating reflective type reflector plates of a reflective
12 liquid crystal display includes the step of creating a protection layer in the pixel
13 region at the same time as the thin film transistors over the glass substrate to
14 prevent light reflection from the exposure stage in the process of forming the
15 undulating resin outgrowth.

16 7. The method as claimed in claim 6, wherein the fabricating process can
17 be implemented by creating the gate electrodes and the protection layer in the
18 pixel region at the same time through unified patterning for the metal interlayers
19 in the process of forming the thin film transistors.

20 8. The method as claimed in claim 6, wherein the fabricating process can
21 be implemented by creating the source/drain electrodes and the protection layer
22 in the pixel region at the same time through unified patterning for the metal
23 interlayers in the process of forming the thin film transistors.

24 9. The method as claimed in claim 7, wherein the glass substrate is used

1 to fabricate the reflective type reflector plate through a sequence of processes: the
2 formation of transparent electrodes, patterning of the transparent electrodes, spin
3 coating of photo resist layer, exposure and developing, and the deposition of the
4 reflective metal film.

5 10. The method as claimed in claim 8, wherein a glass substrate is
6 provided to fabricate a semi-transmissive type reflector plate through a sequence
7 of processes: the formation of transparent electrodes, patterning of the
8 transparent electrodes, spin coating of photo resist layer, exposure and
9 developing, and the deposition of the reflective metal film.

10 11. The method as claimed in claim 7, wherein a glass substrate is
11 provided to fabricate a semi-transmissive type reflector plate through a sequence
12 of processes: the formation of transparent electrodes, patterning of the
13 transparent electrodes, spin coating of photo resist layer, exposure and
14 developing, the deposition of the reflective metal film, and etching back for the
15 light-transmitting region.

16 12. The method as claimed in claim 8, wherein a glass substrate is
17 provided to fabricate semi-transmissive type reflector plate through a sequence
18 of processes: the formation of transparent electrodes, patterning of the
19 transparent electrodes, spin coating of photo resist layer, exposure and
20 developing, deposition of the reflective metal film, and etching back for the
21 light-transmitting region.

22 13. A reflective type reflector plate for a reflective liquid crystal display
23 is created over a glass substrate having thin film transistors, transparent
24 electrodes and undulating resin outgrowth formed thereabove, wherein, a

1 protection layer is created in the pixel region and on the level equivalent to a layer
2 of the thin film transistors for shielding off the reflection from the exposure stage
3 and shortening the exposure time.

4 14. The reflective type reflector plate as claimed in claim 13, wherein the
5 thin film transistors, the transparent electrodes and the undulating resin
6 outgrowth are respectively formed in the same order over the glass substrate.

7 15. The reflective type reflector plate as claimed in claim 13, wherein the
8 protection layer in the pixel region is formed in the layer equivalent to gate
9 electrodes in the thin film transistors.

10 16. The reflective type reflector plate as claimed in claim 13, wherein the
11 protection layer in the pixel region is formed in the layer equivalent to
12 source/drain electrodes in the thin film transistors.

13 17. The reflective type reflector plate as claimed in claim 13, wherein the
14 reflective plate is a full reflector plate.

15 18. The reflective type reflector plate as claimed in claim 14, wherein the
16 reflective plate is a full reflector plate.

17 19. The reflective type reflector plate as claimed in claim 15, wherein the
18 reflective plate is a full reflector plate.

19 20 The reflective type reflector plate as claimed in claim 16, wherein the
20 reflective plate is a full reflector plate.

21 21. The reflective type reflector plate as claimed in claim 13, wherein the
22 undulating resin outgrowth over the glass substrate has a light-transmitting
23 region between protruding portions thereby forming a semi-transmissive type
24 reflector plate.

1 22. The reflective type reflector plate as claimed in claim 14, wherein the
2 undulating resin outgrowth over the glass substrate has a light-transmitting
3 region between protruding portions thereby forming a semi-transmissive type
4 reflector plate.

5 23. The reflective type reflector plate as claimed in claim 15, wherein the
6 undulating resin outgrowth over the glass substrate has a light-transmitting
7 region between protruding portions thereby forming a semi-transmissive type
8 reflector plate.

9 24. The reflective type reflector plate as claimed in claim 16, wherein the
10 undulating resin outgrowth over the glass substrate has a light-transmitting
11 region between protruding portions thereby forming a semi-transmissive type
12 reflector plate.

13 25. The reflective type reflector plate as claimed in claim 13, wherein the
14 protection layer formed over the glass substrate can be metal.

15 26. The reflective type reflector plate as claimed in claim 13, wherein the
16 protection layer over the glass substrate can be non-metal.